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| APPLICATION NO.                          | FILING DATE   | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |  |
|------------------------------------------|---------------|------------------------|-------------------------|------------------|--|
| 09/831,050                               | 08/20/2001    | Clifford Charles Shone | 1581.0800000            | 8265             |  |
| . 75                                     | 90 04/11/2003 |                        |                         |                  |  |
| Sterne Kessler Goldstein & Fox Suite 600 |               |                        | EXAMINER                |                  |  |
| 1100 New York                            | Avenue NW     |                        | WEGERT, S               | ANDRA L          |  |
| Washington, DC 20005-3934                |               |                        |                         |                  |  |
|                                          |               |                        | ART UNIT                | PAPER NUMBER     |  |
|                                          |               |                        | 1647                    | $\prec$          |  |
|                                          |               |                        | DATE MAILED: 04/11/2003 | X )              |  |
|                                          |               |                        |                         | Ü                |  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                | Application No.          | Applicant(s)                                                  |              |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------|--------------|--|--|--|--|
| ·<br>·Office Action Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                | 09/831,050               | SHONE ET AL.                                                  | SHONE ET AL. |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                | Examiner                 | Art Unit                                                      |              |  |  |  |  |
| •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                | Sandra Wegert            | 1647                                                          |              |  |  |  |  |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>1</u> MONTH(S) FROM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| <ul> <li>THE MAILING DATE OF THIS COMMUNICATION.</li> <li>Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul> |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | •                                                                                                                                              |                          |                                                               |              |  |  |  |  |
| 1)⊠ [                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Responsive to communication(s) filed on <u>10</u>                                                                                              |                          |                                                               |              |  |  |  |  |
| ,—                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | •                                                                                                                                              | his action is non-final. |                                                               |              |  |  |  |  |
| 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| Disposition of Claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| <u>-</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4) Claim(s) 25-43 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.                           |                          |                                                               |              |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5) Claim(s) is/are allowed.                                                                                                                    |                          |                                                               |              |  |  |  |  |
| 6) Claim(s) is/are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | laim(s) is/are objected to.                                                                                                                    |                          |                                                               |              |  |  |  |  |
| •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | laim(s) <u>25-43</u> are subject to restriction and/o                                                                                          | or election requirement. |                                                               |              |  |  |  |  |
| Application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | * * * * * * * * * * * * * * * * * * * *                                                                                                        | •                        |                                                               |              |  |  |  |  |
| 9) The specification is objected to by the Examiner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| 11) ☐ The proposed drawing correction filed on is: a) ☐ approved b) ☐ disapproved by the Examiner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| If approved, corrected drawings are required in reply to this Office action.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| 12) The oath or declaration is objected to by the Examiner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| Priority under 35 U.S.C. §§ 119 and 120                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| a)☐ All b)☐ Some * c)☐ None of:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1. Certified copies of the priority documents have been received.                                                                              |                          |                                                               |              |  |  |  |  |
| 2. Certified copies of the priority documents have been received in Application No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| a) The translation of the foreign language provisional application has been received.  15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| Attachment(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                |                          |                                                               |              |  |  |  |  |
| 1) Notice of 2) Notice of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ,<br>of References Cited (PTO-892)<br>of Draftsperson's Patent Drawing Review (PTO-948)<br>tion Disclosure Statement(s) (PTO-1449) Paper No(s) | 5) Notice of I           | Summary (PTO-413) Paper No<br>Informal Patent Application (PT |              |  |  |  |  |

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## **DETAILED ACTION**

## Election/Restriction

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

- Claims 25, 29-33, 36 and 43 drawn to a superoxide dismutase (SOD) linked to a neuronal cell targeting component.
- II. Claims 26-29 and 37-39, drawn to an SOD linked to a mitochondrial targeting component.
- III. Claims 34 and 35, drawn to a method of administering a composition comprisingSOD.
- IV. Claim 36, drawn to a composition comprising an agent other than SOD linked to a neuronal cell targeting component.
- V. Claims 40 and 41, drawn to a nucleic acid encoding an SOD linked to a mitochondrial targeting component.

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The inventions are distinct, each from the other because of the following reasons:

The first claimed invention lacks a special technical feature because it fails to distinguish the claimed invention from the prior art (e.g., Figueiredo, et al, 1997, Exper. Neurol., 145:546-554). The prior art discloses a superoxide dismutase linked to tetanus toxin that is taken up by neuronal cells. This reference meets the limitations of the superoxide dismutase recited in the first claimed invention. Therefore, none of the other claimed inventions can share a special technical feature with the first claimed invention.

Inventions I, II, IV and V are independent and distinct, each from the other, because they are products which possess characteristic differences in structure and function and each has an independent utility that is distinct for each invention which cannot be exchanged. The SOD of group I comprises a targeting sequence specific for neuronal cells. The SOD of Invention II has a targeting sequence specific for mitochondrial binding or entry. Invention IV reads on any agent comprising a neuronal cell targeting sequence, and can therefore be used for purposes other than those for which SOD would be used. Invention V is a nucleic acid which can be used to make a hybridization probe or can be used in gene therapy as well as in the production of the protein of interest.

Invention III is related to Inventions I, II and V as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05 (h)). In the instant case the polypeptides of Groups I and II can be used

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to generate antibodies, while the polynucleotide of Group V can be used therapeutically, as in gene therapy.

Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together, or they have different modes of operation, or they have different functions, or they have different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the agent of Group IV is neither used in nor produced by any of the methods of Group III.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, separate search requirements, and different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 C.F.R. 1.143)

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 C.F.R. 1.48(b) and by the fee required under 37 C.F.R. 1.17(i).

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## Advisory information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra Wegert whose telephone number is (703) 308-9346. The examiner can normally be reached Monday - Friday from 9:30 AM to 6:00 PM (Eastern Time).

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Gary Kunz, can be reached at (703) 308-4623.

Official papers filed by fax should be directed to (703) 308-4242. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

SLW

April 7, 2003

Elyabetz C. Kemmerer

ELIZABETH KEMMERER

PRIMARY EXAMINER